

## **Apparent tendo achilles rupture in the elderly: is routine radiography necessary?**

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### **INTRODUCTION**

Avulsion fractures involving the insertion of the tendo achilles into the calcaneus have been reported previously (Lowy, 1969; Protheroe, 1969). We wish to describe a case which presented clinically as a ruptured tendo achilles and the correct diagnosis was only made on the basis of a radiograph. We wish to stress the need for radiographic assessment of suspected tendo achilles ruptures in the elderly.

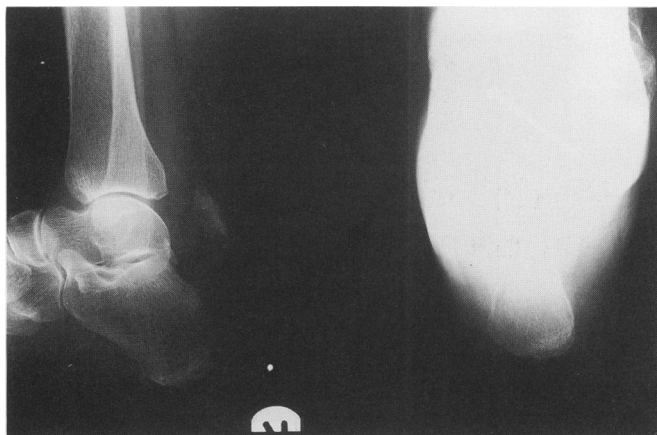
### **CASE REPORT**

A 77-year-old woman stepped off a bus and forcibly dorsiflexed her right ankle, when her heel missed the kerb. She felt an immediate sharp pain in the ankle but was able to continue walking. She attended the accident and emergency (A&E) department the next day when a rupture of the tendo achilles was diagnosed clinically. There was diffuse tenderness involving the length of the tendon and the heel and no gap was palpable. A radiograph was obtained which showed avulsion fracture of the posterosuperior corner of the calcaneus (Fig. 1).

Initially, an attempt at conservative treatment was made. With the foot in maximal equinus a below knee plaster cast was applied and further radiographs taken (Fig. 2), which showed failure of approximation of the bone ends. Thereupon, open reduction and internal fixation was performed. Via a posterior approach the avulsed bony fragment was exposed and re-attached to the calcaneus with a 4-mm diameter short thread cancellous AO screw (Fig. 3). Intra-operatively, the entire insertion of the tendon achilles was found to be attached to the bony fragment. An above knee plaster of Paris cast was applied with the knee slightly flexed and

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**Fig. 1.** Radiograph showing avulsion fracture of the posterosuperior corner of the calcaneus.

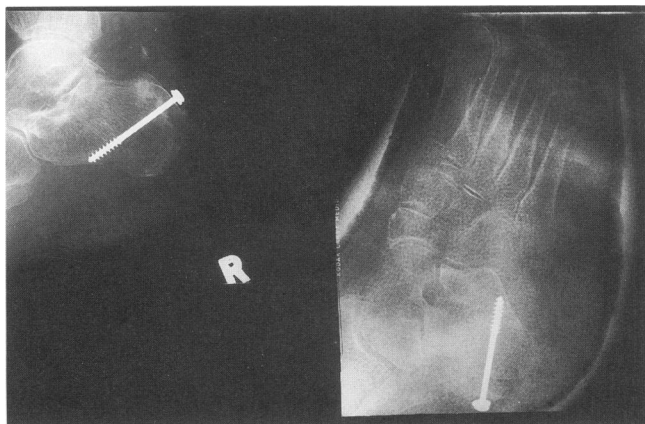


**Fig. 2.** Radiograph showing failure of approximation of the bone ends.

the ankle in maximal equinus. The equinus at the ankle was reduced after 4 weeks and the cast was removed after 8 weeks. A compression stocking was applied for a further 6 weeks. At follow-up 4 months following injury one patient was walking independently and tendo achilles function was unimpaired.

## DISCUSSION

Avulsion fractures involving the tendon achilles insertion appear to be primarily a problem of middle-aged elderly females with osteoporotic bones. These injuries may present clinically very similarly to tendo achilles ruptures. It is not routine



**Fig. 3.** Use of 4-mm short thread cancellous AO screw to re-attach avulsed bony fragment to calcaneus.

practice to obtain radiographs when tendo achilles rupture is diagnosed. If, in addition, conservative treatment is employed the diagnosis may be missed entirely.

We would suggest that radiographic analysis forms part of the routine assessment of suspected tendo achilles ruptures in this age group.

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#### REFERENCES

- Lowy M. (1969) Avulsion fractures of the calcaneus. *Journal of Bone and Joint Surgery* **51B**, 494–497.  
Protheroe K. (1969) Avulsion fractures of the calcaneus. *Journal of Bone and Joint Surgery* **51B**, 118–122.